THE BOUNDARY LAYER EMISSION OF NOVA-LIKE VARIABLES

NASA Grant NAG5-2562

Final Report

For the **Pe**riod 1 April 1994 through 31 March 1995

Principal Investigator

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April 1995

Prepared for

National Aeronautics and Space Administration Greenbelt, MD 20771

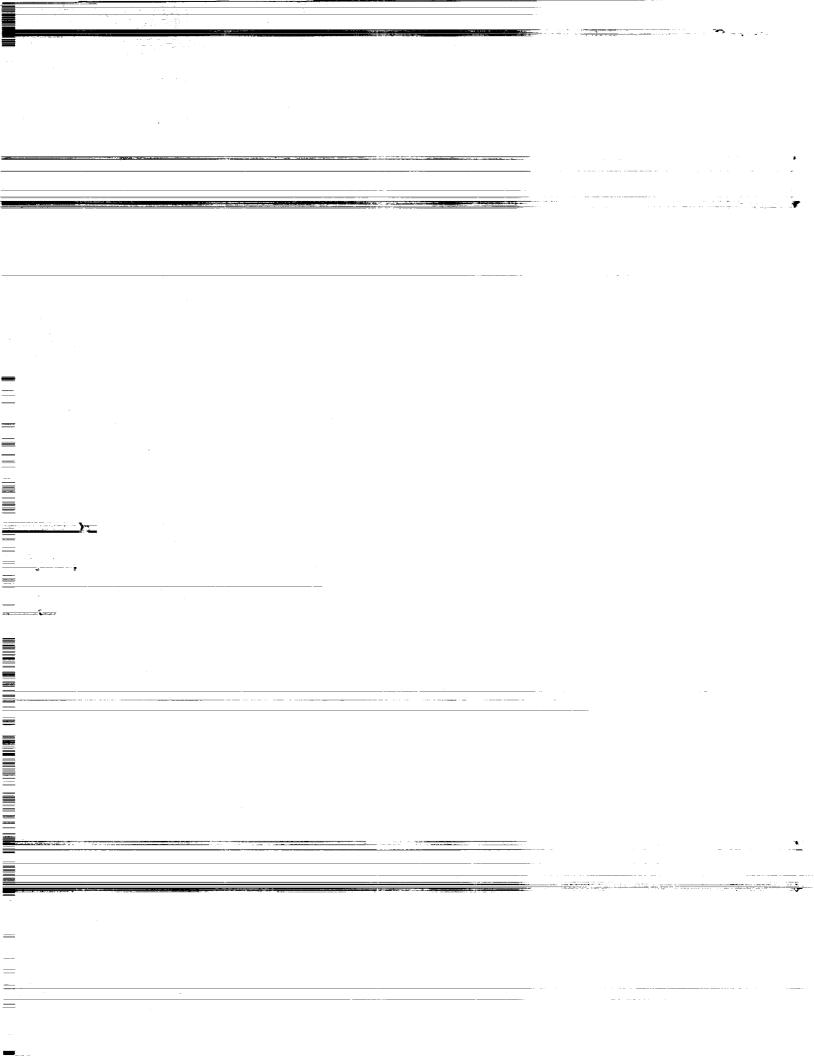
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The Smithsonian Astrophysical Observatory is a member of the Harvard-Smithsonian Center for Astrophysics

FINAL 7N-90-CR

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The EUVE satellite successfully pointed at IX Vel in December 1993. This target was chosen because it was the brightest in the ROSAT WFC survey, and simulations showed that it would provide a weak, but usable, spectrum with EUVE. J. Raymond traveled to Berkeley in early 1995 to analyze the spectrum, and C. Mauche improved considerably on the standard reduction based on his experience with SS Cyg (a narrower band chosen as spectrum with curvature at the shortest wavelengths and more appropriate background regions). In spite of these improvements, there was no signal in the SW on other spectrometers.

Jeremy Drake extracted the DS data. IX Vel was clearly detected, indicating that there was no pointing problem. However, the flux level was several times smaller than anticipated from the ROSAT observations or from the level seen in the EUVE survey (already smaller than expected from ROSAT).

We conclude, therefore, that IX Vel faded below the level of detectability in the SW spectrometer at the time of the observation. The detection in the DS and the absence of a spectrum strongly suggest that all the flux seen with the DS is at the extreme short wavelength end of its spectral range, where the SW spectrograph is insensitive.

After considerable effort, we believe that the data will only provide a somewhat ambiguous N_H determination and a supplement to the ROSAT and EUVE survey fluxes, so we decided, at least for the time being, to concentrate on the more promising observations of dwarf novae. The grant has been used for study of highly ionized iron (along the

lines of Brickhouse, Raymond and Smith 1994) and for J. Raymond's contribution to the SS Cyg study of Mauche, Raymond and Mattei (1994) and VW Hyi (Mauche *et al.*, in preparation). It also covered J. Raymond's participation in a review paper on cataclysmic variable winds (Mauche and Raymond 1994).

- Brickhouse, N.S., Raymond, J.C., & Smith, B.W. 1994, submitted to Ap. J. Suppl., "New Model of Iron Spectra in the Extreme Ultraviolet and Application to SERTS and EUVE Observations: A Solar Active Region and Capella"
- Raymond, J.C., Mauche, C.W., Bowyer, S., & Hurwitz, M. 1995, Ap. J., , 440, 331, "ORFEUS Observations of AM Her"
- Mauche, C.W., Raymond, J.C., & Mattei, J.A. 1994, Ap. J., in press, "EUVE Observations of the Anomalous 1993 August Outburst of SS Cyg"
- Mauche, C.W., and Raymond, J.C. 1994, to appear in proceedings of "Cosmic Winds" conference, "Winds from Cataclysmic Variables"